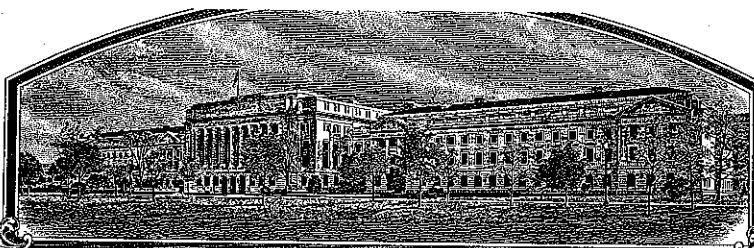


No.

200500167



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

West Bred, LLC

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, DURUM

'Primo D'oro'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this sixth day of March, in the year two thousand and six.

Attest:

  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

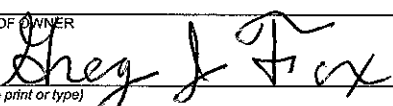
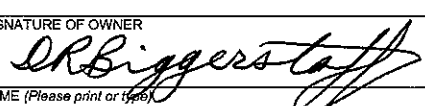
  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER  WestBred LLC		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME  FA-898-782		3. VARIETY NAME  Primo D'oro	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  8111 Timberline Drive Bozeman, MT 59718-8184		5. TELEPHONE (include area code)  (406) 587-1218		<b>FOR OFFICIAL USE ONLY</b> <b>PVPO NUMBER</b> <b>200500167</b> <b>FILING DATE</b> <b>March 2, 2005</b>	
		6. FAX (include area code)  (406) 586-8247			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)  Corporation		8. IF INCORPORATED, GIVE STATE OF INCORPORATION  AZ		9. DATE OF INCORPORATION  August 24, 1990	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)  Dr. Greg Fox WestBred LLC 717 14th Street South. Fargo, ND 58103				<b>FILING AND EXAMINATION FEES:</b> <b>\$ 3652.00</b> <b>DATE 03/02/2005</b> <b>CERTIFICATION FEE:</b> <b>\$ 768.00</b> <b>DATE 02/10/2006</b>	
11. TELEPHONE (include area code)  (701) 293-5146		12. FAX (include area code)  (701) 293-5146		13. E-MAIL  gfox @westbred.com	
14. CROP KIND (Common Name)  Durum		16. FAMILY NAME (Botanical)  Gramineae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL)  <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP  Triticum durum		17. IS THE VARIETY A FIRST GENERATION HYBRID?  <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)				20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23) 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED 22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?  <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO  IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)				24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)?  <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO  IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.  The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.  Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF OWNER  		SIGNATURE OF OWNER  			
NAME (Please print or type)  Dr. Greg J. Fox		NAME (Please print or type)  Dr. Dan R. Biggerstaff			
CAPACITY OR TITLE  Durum Breeder		DATE  02-28-2005		CAPACITY OR TITLE  Vice President	
				DATE  February 24, 2005	

## INSTRUCTIONS

2005 00 16 7

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. **Retain one copy for your files.** All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**Plant Variety Protection Office**

**Telephone: (301) 504-5518**

**FAX: (301) 504-5291**

**Homepage:** <http://www.ams.usda.gov/science/pvpo/pvp.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

## ITEM

- 19a. Give:
- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
  - (2) the details of subsequent stages of selection and multiplication;
  - (3) evidence of uniformity and stability; and
  - (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
  - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

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**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

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**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

U.S., March 12, 2004

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**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

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**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

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According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**"Primo D'oro"**  
Durum Wheat

**Exhibit A. Origin and Breeding History**

Primo D'oro (Expt. # FA-898-782) is a hard amber durum derived from the cross "Desert Lax-Headed Selection #1" (DLHS#1) x "Rugby" (1994). DLHS#1 was a single plant selection from a durum wheat breeding population "AZ-MSFRS-86", released by the University of Arizona in 1987. Rugby is a tan chaffed durum noted to have useful levels of field resistance to scab (*Fusarium Head Blight*) in North Dakota. The  $F_1$ ,  $F_2$ , and  $F_3$  generations of this cross were advanced as a bulk (1995-1996). In 1996, the  $F_4$  population was grown in a scab evaluation nursery in Fisher, MN. A single scab resistant  $F_4$  plant was selected to form Primo D'oro. Primo D'oro was advanced and evaluated as an  $F_5$  plot in Brawley, CA in 1997-1998, and as an  $F_6$  plot in Fisher, MN (under scab pressure) in 1998. It was increased as an  $F_7$  bulk in Yuma, AZ in 1998-1999. From this plot, 200 random heads were selected and grown as head rows, evaluated and bulked as purified  $F_8$  seed in Bozeman, MT in 2000. The resultant Breeder Seed was advanced as an  $F_9$  bulk at Fisher, MN in 2001 and again as an  $F_{10}$  at Ross, ND in 2002. Due to wheat impurities, Primo D'oro was repurified with 256 random head selections, grown and evaluated as head rows in Yuma, AZ in 2002-2003, and bulked to form purified Breeder Seed ( $F_{11}$ ). This Breeder Seed was planted at Webster, ND in 2003 and harvested as Certified Foundation Primo D'oro seed.

Throughout these increases and 25 replicated trials conducted from 1999-2003 throughout ND, Primo D'oro has proven to be a stable and uniform cultivar. Besides being selected for scab resistance levels similar to Rugby, Primo D'oro has been

evaluated for agronomic suitability, resistance to stem rust and leaf rust and moderate susceptibility to Tan Spot and Septoria tritici with yield similar to Rugby (Table 1). Primo D'oro quality is quite suitable measured as Hard Vitreous Amber Count, test weight, and high gluten strength measured as SDS sedimentation values (average 40+ mm) compared to Rugby (average 24 mm) (Table 2). Pasta making characteristics of Primo D'oro are quite acceptable and confirmed by the results of the Wheat Quality Council Trial (Table 3).

Foundation Seed harvested in the fall of 2003 will be planted in the spring of 2004 to produce Registered and Certified seed. Certified seed will first be available to growers in 2005.

A variant that is similar to Primo D'oro but that is 10-20 cm shorter may be present at a frequency of 1/10,000. Otherwise, Primo D'oro is stable and uniform in appearance and performance across the  $F_4$  to  $F_{11}$  generations.

#### **Exhibit B. Statement of Distinctness**

Primo D'oro is most similar to the variety Rugby. However, Primo D'oro has white/amber chaff and glumes at maturity while the chaff and glumes of Rugby are tan in color.

The above comparisons along with the complete objective description (Exhibit C) shows Primo D'oro to be a novel variety of Hard Amber Durum.

Exhibit A. Table 1. Performance of FA898-782 in North Dakota Yield Trials from 1999 to 2003.

Variety	Days to Head	Height cm	Lodging %	Flag Leaf Disease %	Scab Damage %	Total Damage %	DON <sup>1</sup> ppm
Belzer	59.2	90.8	2.0	12.9	1.1	4.4	2.2
Ben	57.9	90.1	1.1	4.6	1.4	5.3	3.7
Lebsock	57.3	85.6	1.2	9.5	1.2	4.5	2.8
Maier	58.5	84.8	1.1	7.1	1.3	4.7	3.1
Mountrail	58.4	86.8	1.4	8.2	1.6	4.0	3.4
Munich	57.0	81.8	0.8	10.0	1.7	4.4	3.3
Rugby	57.3	95.7	2.7	8.2	1.5	3.5	3.1
FA-898-782	56.0	98.6	2.5	15.1	1.3	2.8	3.0
Number of Sites/Years	11/5	27/5	14/3	17/5	27/5	27/5	12/3
Overall Average	57.69	89.30	1.61	9.45	1.38	4.22	3.09
LSD 0.05	0.71	1.20	0.60	3.31	0.21	0.45	0.32

Table 1 (continued).

Variety	HVAC <sup>2</sup> %	Falling Number seconds	Ash %	SEDS <sup>3</sup> mm	Protein %	Test Weight lb/bu	Yield bu/a	Color <sup>4</sup> Score
Belzer	90.8	404.6	1.97	57.3	14.7	56.9	51.5	
Ben	90.2	372.0	1.84	43.5	14.6	59.4	53.8	
Lebsock	90.5	398.3	1.80	38.5	14.2	59.7	55.9	7.2
Maier	91.2	375.6	1.92	49.8	15.2	58.3	51.7	
Mountrail	92.2	387.0	1.80	39.3	14.3	58.0	55.2	7.1
Munich	91.4	387.4	1.90	36.0	14.5	58.1	55.3	
Rugby	92.8	365.7	1.86	21.8	14.4	59.3	53.4	
FA-898-782	93.0	378.6	1.87	41.3	14.6	59.4	53.4	7.3
Number of Sites/Years	27/5	26/5	10/2	11/3	27/5	27/5	27/5	6/1
Overall Average	91.50	383.67	1.90	40.94	14.56	58.65	53.78	-
LSD 0.05	0.78	14.38	0.05	3.81	0.17	0.36	2.05	-

<sup>1</sup> DON=Deoxynivalenol – the toxin produced by Fusarium<sup>2</sup> HVAC=hard vitreous amber count<sup>3</sup> SEDS=SDS Sedimentation Value<sup>4</sup> Color=Based on colorimeter readings using the Hunter Lab scale: Score=(L+2b)/20.

A score of 10 is the highest and 1 is the lowest rating. Ratings of 7 or higher are quite acceptable

Exhibit A. Table 2. Paired samples t-test of SDS Sedimentation  
Values of FA-898-782 compared to Rugby  
in 15 Environments

Rugby  $\neq$  FA-898-782

Performed by WestBred LLC

Date 1/24/04

n | 15

	n	Mean	SD	SE
Rugby	15	23.05	2.23	0.575
WPB 898-782	15	45.71	4.97	1.284
Difference	15	-22.67	4.16	1.073

Difference between means | -22.67  
95% CI | -24.97 to -20.37

t statistic | -21.12  
2-tailed p | <0.0001

Location	SDS Sedimentation Values (mm)	
	Rugby	WPB 898-782
Carrington 2002	23.7	48.3
Garrison 2002	21.3	45.0
Leeds 2002	22.0	44.7
Rolla 2002	23.0	49.0
Ross 2002	23.3	47.0
Westhope 2002	23.7	50.0
Fisher, MN 1998	24.0	46.0
Casselton, ND 2000	22.0	50.3
Garrison, ND, 2001	20.0	34.0
Leeds, ND, 2001	23.0	41.7
Ross, ND, 2001	22.0	38.0
Casselton, ND, 2001	30.0	51.0
Casselton #1, ND, 2002	24.0	49.0
Casselton #2, ND, 2002	22.0	50.0
Carrington 2003	21.7	41.7

Exhibit A. Table 3. Head-to-head comparison of FA-898-782 with the quality check Maier. A score of 3 to 4 is an average rating for acceptable overall spaghetti quality. Taken from the 2000 Wheat Quality Council Durum Quality Summary pp. 16-17.

### Properties FA-898-782 Samples

	Maier 898-782 (Check sample)		Maier 898-782 (Check sample)	
Location	Minot	Minot	Sidney	Sidney
Wheat Protein (%) (12% MB)	15.80	14.6	17.6	15.7
Semolina Protein (%) (14% MB)	15.37	14.2	16.89	14.8
<b>Wheat Data:</b>				
Grade	2HAD	2HAD	1HAD	1HAD
Damaged Kernels (%)	1.4	1.4	0.2	0.1
Shrunken and Broken (%)	0.8	0.7	0.2	0.1
Test Weight (lb/bu)	59.6	59.8	61.2	62.4
HVAK (%)	91	91	98	96
Large Kernels (%)	67.4	53.0	87.3	90.5
Small Kernels (%)	2.3	4.8	0.7	0.5
SDS Micro-Sedimentation	48	38	34	29
Falling Number (Seconds)	261	308	400+	400+
<b>Semolina Data:</b>				
Semolina Extraction (%)	68.7	68.4	61.3	62.8
Total Extraction (%)	75.3	74.6	69.3	68.4
Semolina Ash (%) (14% MB)	0.77	0.73	0.86	0.78
Wet Gluten (%) (14% MB)	43.0	39.6	44.6	40.7
Gluten Index (%)	56.36	43.89	44.32	38.50
Computer Speck Count (per 100 cm <sup>2</sup> )				
Total	356	150	184	137
Black	123	48	49	51

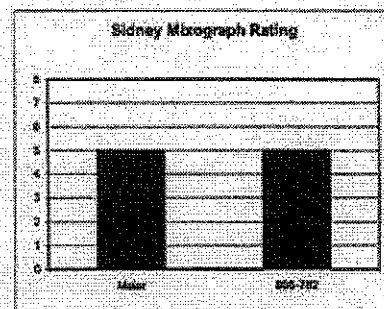
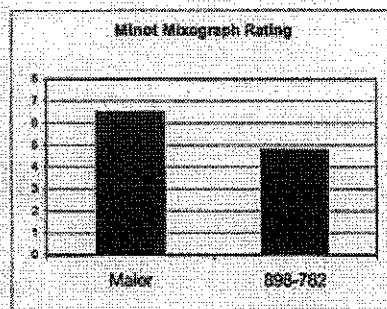
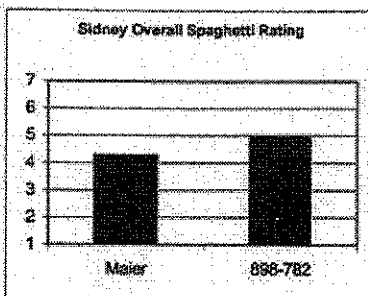
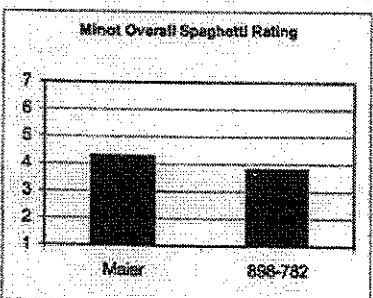
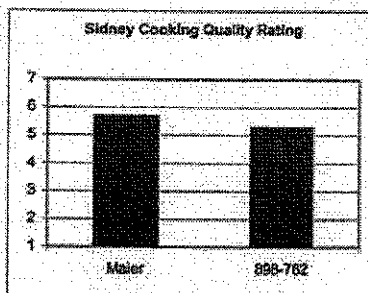
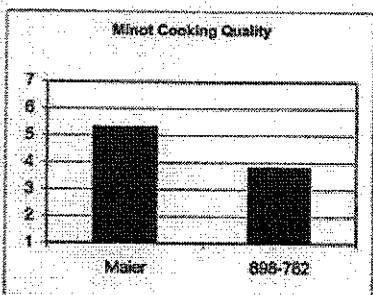
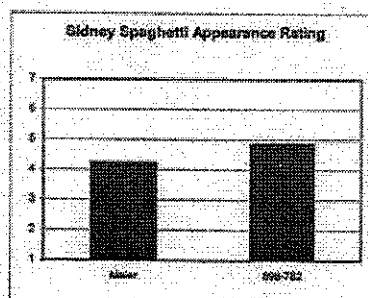
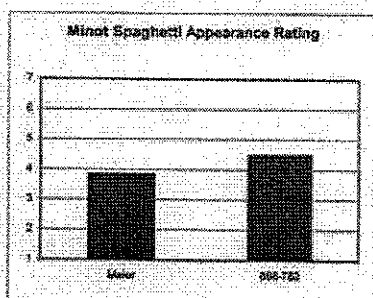
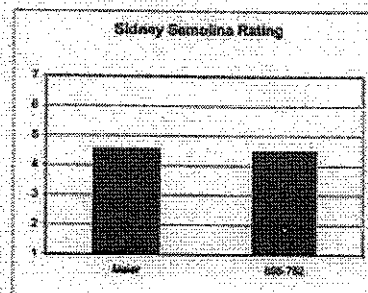
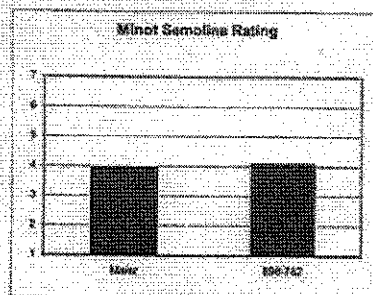




Exhibit A. Table 3. (continued)



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Form Approved - OMB No. 0581-0055

Instructions: searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

EXHIBIT C  
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY  
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S) <b>WestBred LLC</b>	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or RD No., City, State, and Zip Code) <b>8111 Timberline Dr Bozeman, MT 58718-8184</b>	PVPO NUMBER <b>2005 00 16 7</b>
	VARIETY NAME <b>Primo D'oro</b>
	TEMPORARY OR EXPERIMENTAL DESIGNATION <b>FA-898-782</b>

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g.  or ) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: \_\_\_\_\_

Please answer all questions for your variety; lack of response may delay progress of your application.

## 1. KIND:

- 1=Common  
2=Durum  
3=Club  
4=Other (SPECIFY): \_\_\_\_\_

## 2. VERNALIZATION:

- 1=Spring  
2=Winter  
3=Other (SPECIFY): \_\_\_\_\_

## 3. COLEOPTILE ANTHOCYANIN:

- 1 = Absent 2 = Present

## 4. JUVENILE PLANT GROWTH:

- 1 = Prostrate 2 = Semi-erect 3 = Erect

## 5. PLANT COLOR (boot stage):

- 1 = Yellow-Green  
2 = Green  
3 = Blue-Green

## 6. FLAG LEAF (boot stage):

- 1 = Erect  
2 = Recurved  
  
 1 = Not Twisted  
2 = Twisted  
  
 1 = Wax Absent  
2 = Wax Present

## 7. EAR EMERGENCE:

- Number of Days (Average)  
 Number of Days Earlier Than **Rugby** \*  
Same as \_\_\_\_\_ \*  
 Number of Days Later Than **Monroe** \*

\* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

8. ANTER COLOR:

☒ 1 = Yellow  
2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns):

☒ 099 cm (Average)  
☒ 03 cm Taller Than Rugby \*  
Same as \_\_\_\_\_ \*  
☒ 02 cm Shorter Than Plenty \*

10. STEM:

A. ANTHOCYANIN

☒ 1 = Absent  
2 = Present

B. WAXY BLOOM

☒ 2 = Absent  
2 = Present

C. HAIRINESS  
(last internode of rachis)

☒ 2 = Absent  
2 = Present

D. INTERNODE

☒ 1 = Hollow 2 = Semi-solid 3 = Solid

☒ 3 Number of Nodes

E. PEDUNCLE

☒ 1 = Erect 2 = Recurved 3 = Semi-erect

☒ 28 cm Length

F. AURICLE

☒ 1 Anthocyanin 1 = Absent 2 = Present

☒ 2 Hair 1 = Absent 2 = Present

11. HEAD (at Maturity):

A. DENSITY

☒ 2 = Lax  
2 = Middense (Laxidense)  
3 = Dense

B. SHAPE

☒ 2 = Tapering  
2 = Strap  
3 = Clavate  
4 = Other (SPECIFY): \_\_\_\_\_

C. CURVATURE

☒ 1 = Erect  
2 = Inclined  
3 = Recurved

D. AWNEDNESS

☒ 4 = Awnless  
2 = Apically Awnletted  
3 = Awnletted  
4 = Awned

## 12. GLUMES (at Maturity):

## A. COLOR

- ☐ 1 1 = White  
 2 = Tan  
 3 = Other (SPECIFY): \_\_\_\_\_

## B. SHOULDER

- ☐ 1 1 = Wanting 2 = Oblique  
 3 = Rounded 4 = Square  
 5 = Elevated 6 = Apiculate  
 7 = Other (SPECIFY): \_\_\_\_\_

## C. SHOULDER WIDTH

- ☐ 2 1 = Narrow  
 2 = Medium  
 3 = Wide

## D. BEAK

- ☐ 3 1 = Obtuse  
 2 = Acute  
 3 = Acuminate

## E. BEAK WIDTH

- ☐ 2 1 = Narrow  
 2 = Medium  
 3 = Wide

## F. GLUME LENGTH

- ☐ 3 1 = Short (ca. 7mm)  
 2 = Medium (ca. 8mm)  
 3 = Long (ca. 9mm)

## G. WIDTH

- ☐ 2 1 = Narrow (ca. 3mm)  
 2 = Medium (ca. 3.5mm)  
 3 = Wide (ca. 4mm)

## 13. SEED

## A. SHAPE

- ☐ 3 1 = Ovate  
 2 = Oval  
 3 = Elliptical

## B. CHEEK

- ☐ 2 1 = Rounded  
 2 = Angular

## C. BRUSH

- ☐ 1 1 = Short  
 2 = Medium  
 3 = Long

- ☐ 1 1 = Not Collared  
 2 = Collared

## D. CREASE

- ☐ 2 1 = Width 60% or less of Kernel  
 2 = Width 80% or less of Kernel  
 3 = Width Nearly as Wide as Kernel

- ☐ 2 1 = Depth 20% or less of Kernel  
 2 = Depth 35% or less of Kernel  
 3 = Depth 50% or less of Kernel

## E. COLOR

- ☐ 2 1 = White  
 2 = Amber  
 3 = Red  
 4 = Other (SPECIFY): \_\_\_\_\_

## F. TEXTURE

- ☐ 1 1 = Hard  
 2 = Soft  
 3 = Other (SPECIFY): \_\_\_\_\_

## G. PHENOL REACTION (see instructions):

- ☐ 1 = Ivory 4 = Dark Brown  
 2 = Fawn 5 = Black  
 3 = Light Brown

## H. SEED WEIGHT

- ☐ 3 8 g/1000 seed (Whole number only)

## I. GERM SIZE

- ☐ 2 1 = Small  
 2 = Midsize  
 3 = Large



14. Disease: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input checked="" type="checkbox"/> 2	Stem Rust ( <i>Puccinia graminis</i> f. sp. <i>tritici</i> ) Prevalent Races	<input checked="" type="checkbox"/> 2	Leaf Rust ( <i>Puccinia recondita</i> f. sp. <i>tritici</i> ) Prevalent Races
<input type="checkbox"/> 0	Stripe Rust ( <i>Puccinia striiformis</i> ) Prevalent Races	<input type="checkbox"/> 0	Loose Smut ( <i>Ustilago tritici</i> )
<input checked="" type="checkbox"/> 3	Tan Spot ( <i>Pyrenophora tritici-repentis</i> ) Prevalent Races	<input type="checkbox"/> 0	Flag Smut ( <i>Urocystis agropyri</i> )
<input type="checkbox"/> 0	Halo Spot ( <i>Selenophoma donacis</i> )	<input type="checkbox"/> 0	Common Bunt ( <i>Tilletia tritici</i> or <i>T. laevis</i> )
<input type="checkbox"/> 0	<i>Septoria nodorum</i> (Glume Blotch)	<input type="checkbox"/> 0	Dwarf Bunt ( <i>Tilletia controversa</i> )
<input type="checkbox"/> 0	<i>Septoria avenae</i> (Speckled Leaf Disease)	<input type="checkbox"/> 0	Karnal Bunt ( <i>Tilletia indica</i> )
<input checked="" type="checkbox"/> 3	<i>Septoria tritici</i> (Speckled Leaf Blotch) Prevalent Races	<input type="checkbox"/> 0	Powdery Mildew ( <i>Erysiphe graminis</i> f. sp. <i>tritici</i> )
<input type="checkbox"/> 1	Scab ( <i>Fusarium</i> spp.) Prevalent Races	<input type="checkbox"/> 0	"Snow Molds"
<input type="checkbox"/> 0	"Black Point" (Kernel Smudge)	<input type="checkbox"/> 0	Common Root Rot ( <i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)
<input type="checkbox"/> 0	Barley Yellow Dwarf Virus (BYDV)	<input type="checkbox"/> 0	Rhizoctonia Root Rot ( <i>Rhizoctonia solani</i> )
<input type="checkbox"/> 0	Sollborne Mosaic Virus (SBMV)	<input type="checkbox"/> 0	Black Chaff ( <i>Xanthomonas campestris</i> pv. <i>translucens</i> )
<input type="checkbox"/> 0	Wheat Yellow (Spindle Streak) Mosaic Virus	<input type="checkbox"/> 0	Bacterial Leaf Blight ( <i>Pseudomonas syringae</i> pv. <i>syringae</i> )
<input type="checkbox"/> 0	Wheat Streak Mosaic Virus (WSMV)	<input type="checkbox"/>	Other (SPECIFY) _____
<input type="checkbox"/>	Other (SPECIFY) _____	<input type="checkbox"/>	Other (SPECIFY) _____
<input type="checkbox"/>	Other (SPECIFY) _____	<input type="checkbox"/>	Other (SPECIFY) _____
<input type="checkbox"/>	Other (SPECIFY) _____	<input type="checkbox"/>	Other (SPECIFY) _____

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

<input type="checkbox"/> 0	Hessian Fly ( <i>Mayetiola destructor</i> )	<input type="checkbox"/>	Other (SPECIFY) _____
<input checked="" type="checkbox"/> 1	Stem Sawfly ( <i>Cephus</i> spp.) Has a hollow stem	<input type="checkbox"/>	Other (SPECIFY) _____
<input type="checkbox"/> 0	Cereal Leaf Beetle ( <i>Oulema melanopa</i> )	<input type="checkbox"/>	Other (SPECIFY) _____
<input type="checkbox"/> 0	Russian Aphid ( <i>Diuraphis noxia</i> )	<input type="checkbox"/>	Other (SPECIFY) _____

15. INSECT: *Continued* (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

☒ Greenbug (*Schizaphis graminum*)

☐ Other (SPECIFY) \_\_\_\_\_

☒ Aphids

☐ Other (SPECIFY) \_\_\_\_\_

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) WestBred LLC	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER FA-898-782	3. VARIETY NAME Primo D'oro
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 8111 Timberline Dr. Bozeman, MT 59718-8184	5. TELEPHONE (Include area code) (406) 587-1218	6. FAX (Include area code) (406) 586-8247
7. PVPO NUMBER 20050016Z		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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